

NEbraska

Resource



Assessment

Nebraska Natural Resources Assessment

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Presentation Overview

- Background
 - Vision, Charge, Goals
- Process
 - Who, Input, Analysis
- Results
 - Products, Updates, Use

Vision

- *Cooperatively develop a science based resource assessment that will serve as a guide to federal, state and local units of government in focusing resources to hydrologic units with the greatest need.*

Charge

- Utilize a Subcommittee of the State Technical Committee to update NERA 1 analysis.
- Project began January 2005.
- Final analysis by May 2005

Goals

- Complete an assessment on the major resources listed for conservation planning:
 - Forestry
 - Range
 - Surface Water Quantity
 - Soil Quality
 - Water Quality
 - Ground Water Quantity
 - Wetlands
 - Wildlife

Goals

- Present data results by a consistent and common land unit, 8 digit hydrologic units.
- Provide for updates as new or better data becomes available.
- Make results available to partners to increase public awareness of our natural resource needs in Nebraska.

Who

- Meeting notices sent to all original members of State Technical Committee NERA Subcommittee.
- Involvement from:
 - Farm Bureau
 - Corn Growers
 - DNR, DEQ, G&P, Forest Serv.
 - NE Dept. of Ag
 - Central NE PPD
 - Grazing Lands Org.
 - FSA, NRCS
 - NARD
 - Congressman Osborn Office
 - Senator Hagel's Office
 - Center for Rural Affairs

Input

- Reviewed & revised resource concerns from NERA 1.
- Reviewed data from NERA 1 to determine if more current data or new data was available.
- Investigated and submitted related data sources that were:
 - Readily available or easily converted to digital format
 - State wide in scope

Analysis

- Data layers reviewed and assigned preliminary weights by technical specialists.
- Data layers imported into geographic information system and summarized by 8 digit hydrologic unit (HU).
- Summarized data classified and assigned weights for analysis.

Consensus

- Subcommittee meetings held to review and provide comments on analysis.
- Based on group consensus:
 - Reassigned weight values
 - Dropped data layers
 - Clarified data issues
 - Agreed on final assessment

Results May 2005

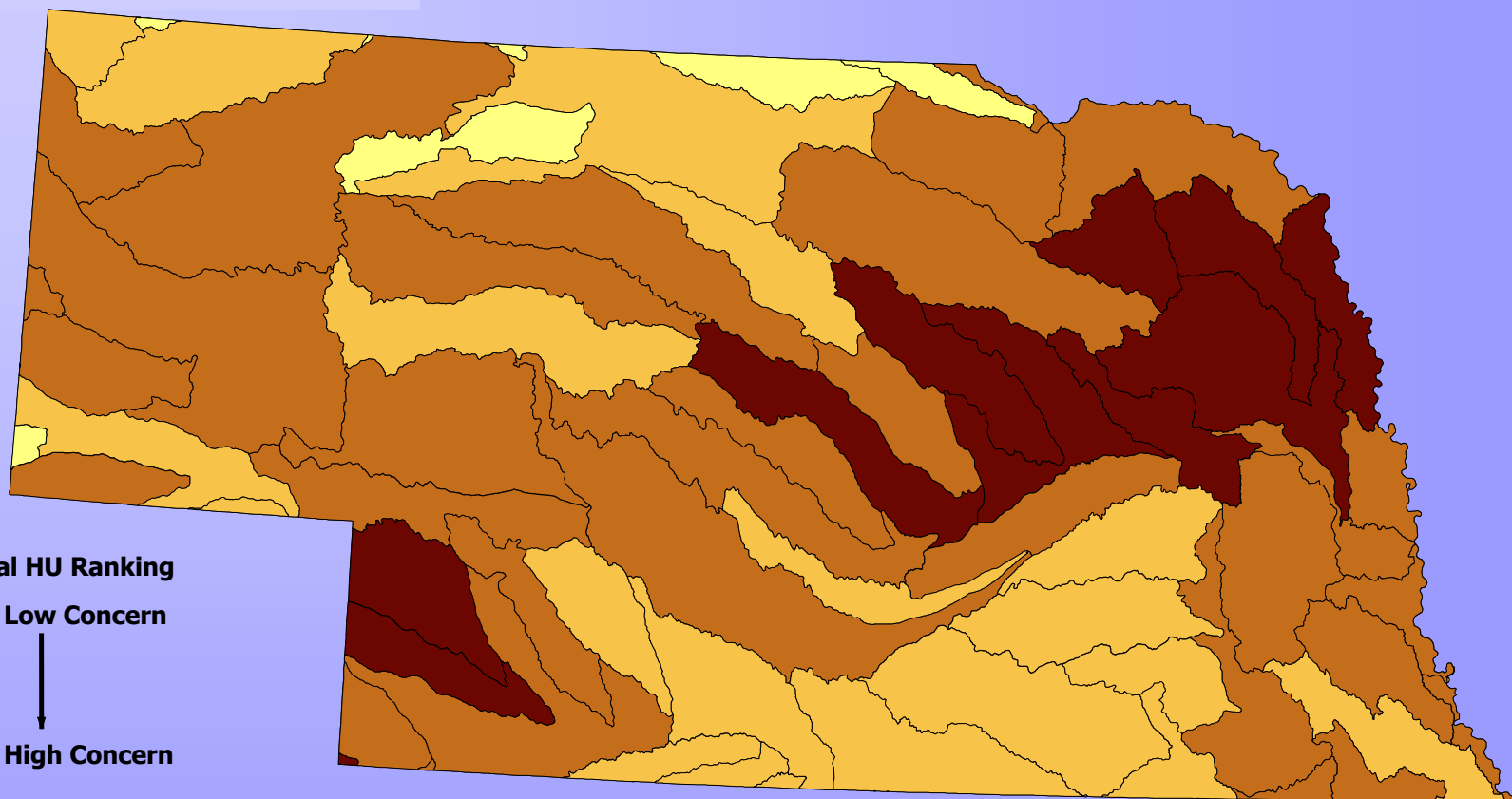
- Completed assessments for:
 - Forestland
 - Rangeland
 - Soil Quality
 - Surface Water Quantity
 - Ground Water Quantity
 - Wetlands
 - Wildlife
 - Water Quality

Soil Quality/Health

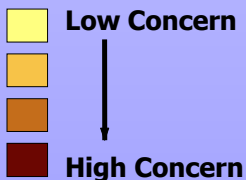
(Related To Cropland)



Soil Quality



Final HU Ranking



9 Base Layers and Weight

- | | | | |
|------------------|-------------|-------------------|------------|
| – Water Erosion | High Weight | – Soil Acidity | Low Weight |
| – Wind Erosion | High Weight | – Soil Salinity | Low Weight |
| – EI – Wind | High Weight | – Soil Alkalinity | Low Weight |
| – EI – Water | High Weight | – 2004 No Till | Low Weight |
| – Organic Matter | High Weight | | |

Analysis Example

Base Layer 1

Base Layer 2

Base Layer 3

Base Layer 4

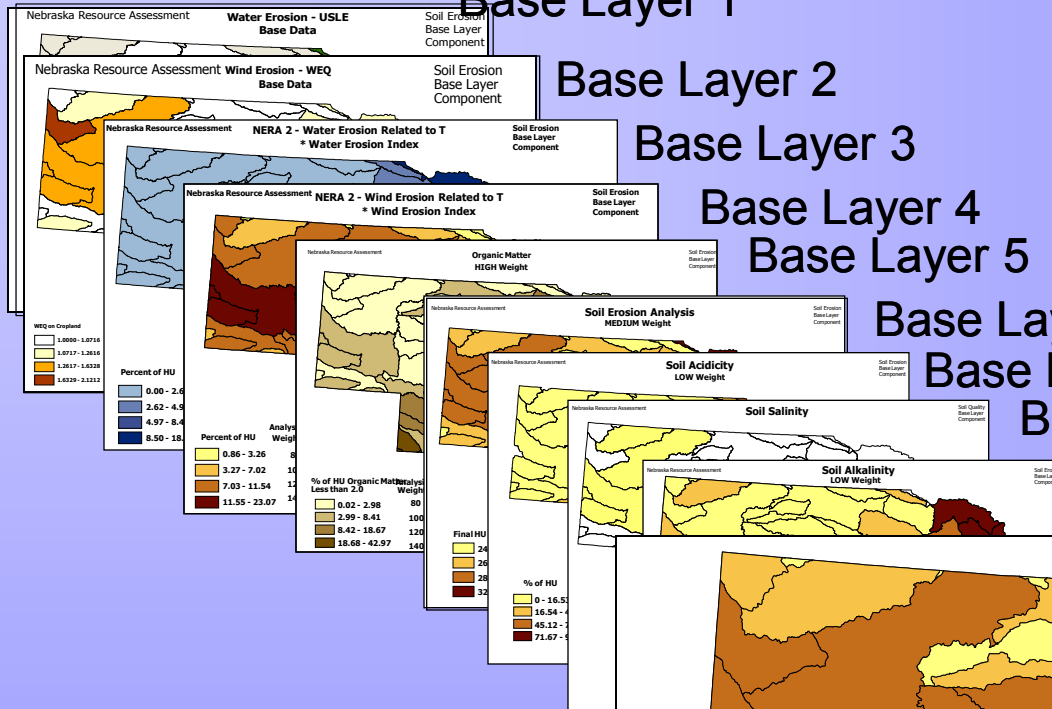
Base Layer 5

Base Layer 6

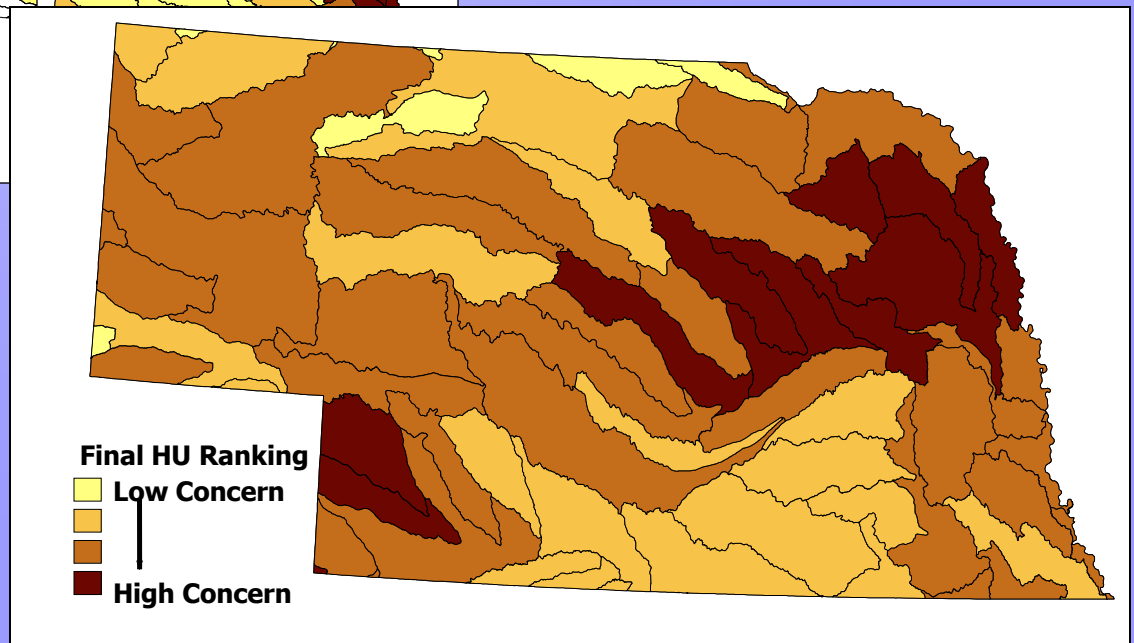
Base Layer 7

Base Layer 8

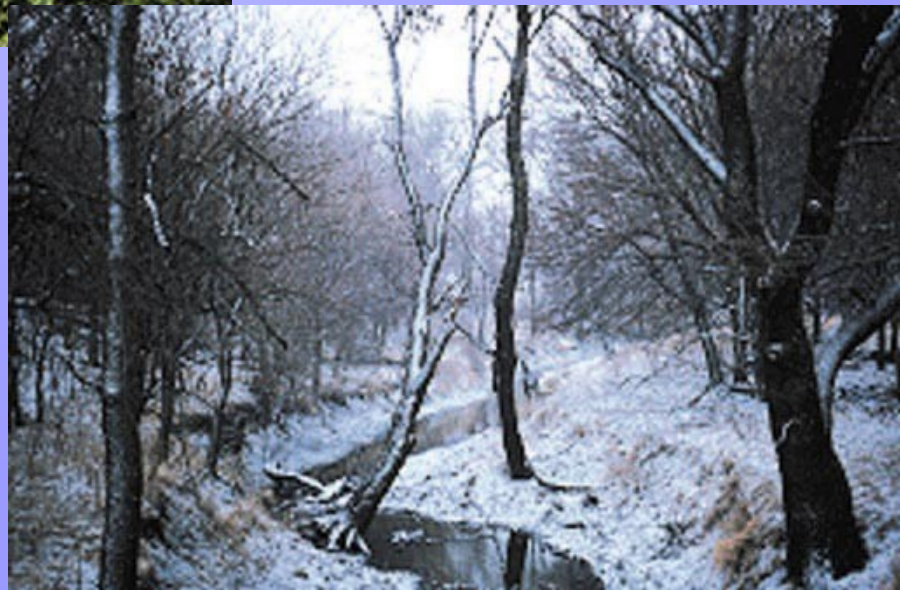
Base Layer 9



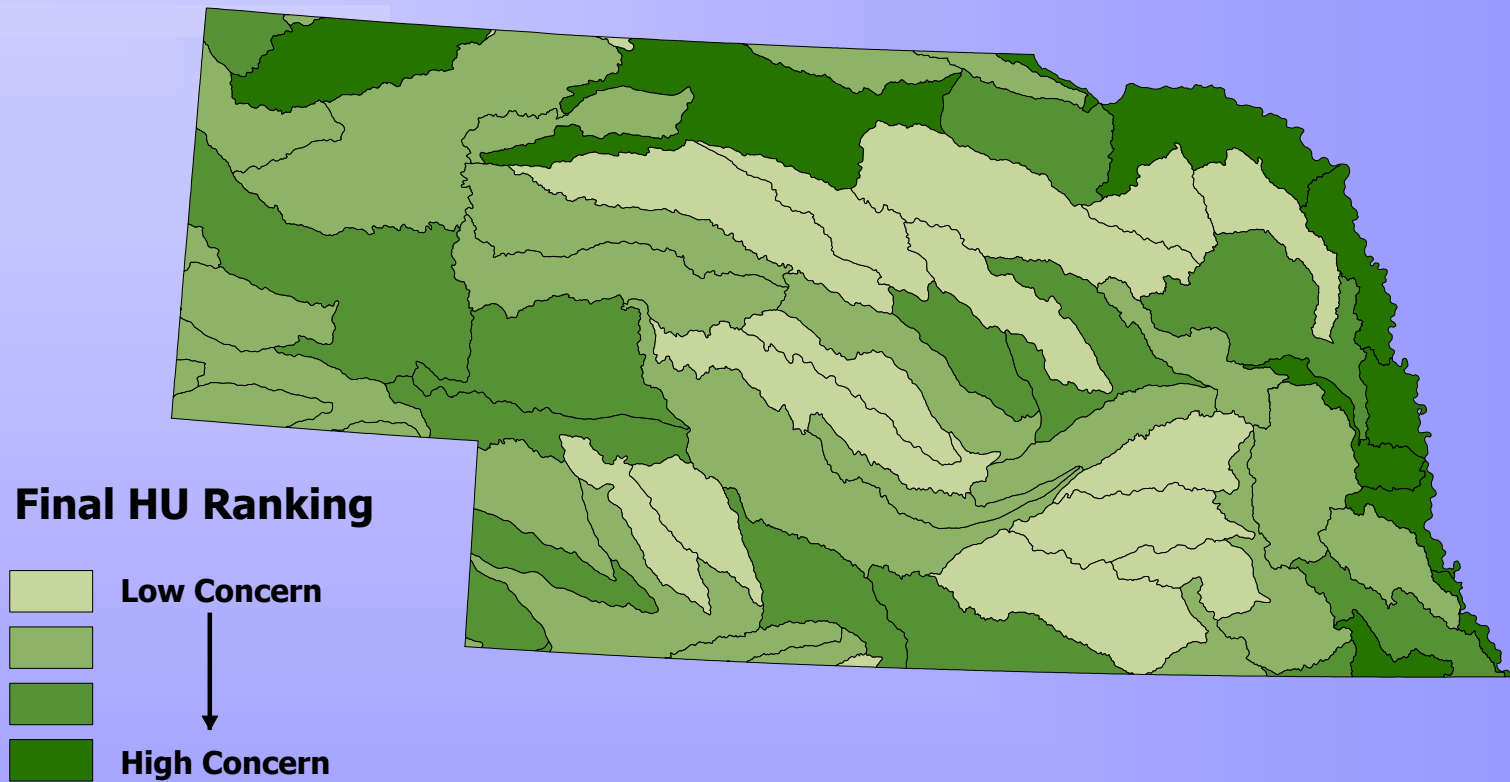
Final Analysis



Forestland



Forestland



- 4 Base layer components and weights:

- % Forest Cover 2003
- % Native Forest
- T & E and At Risk Woodland Species
- Forest Trend

Medium Weight

Medium Weight

Low Weight

Low Weight

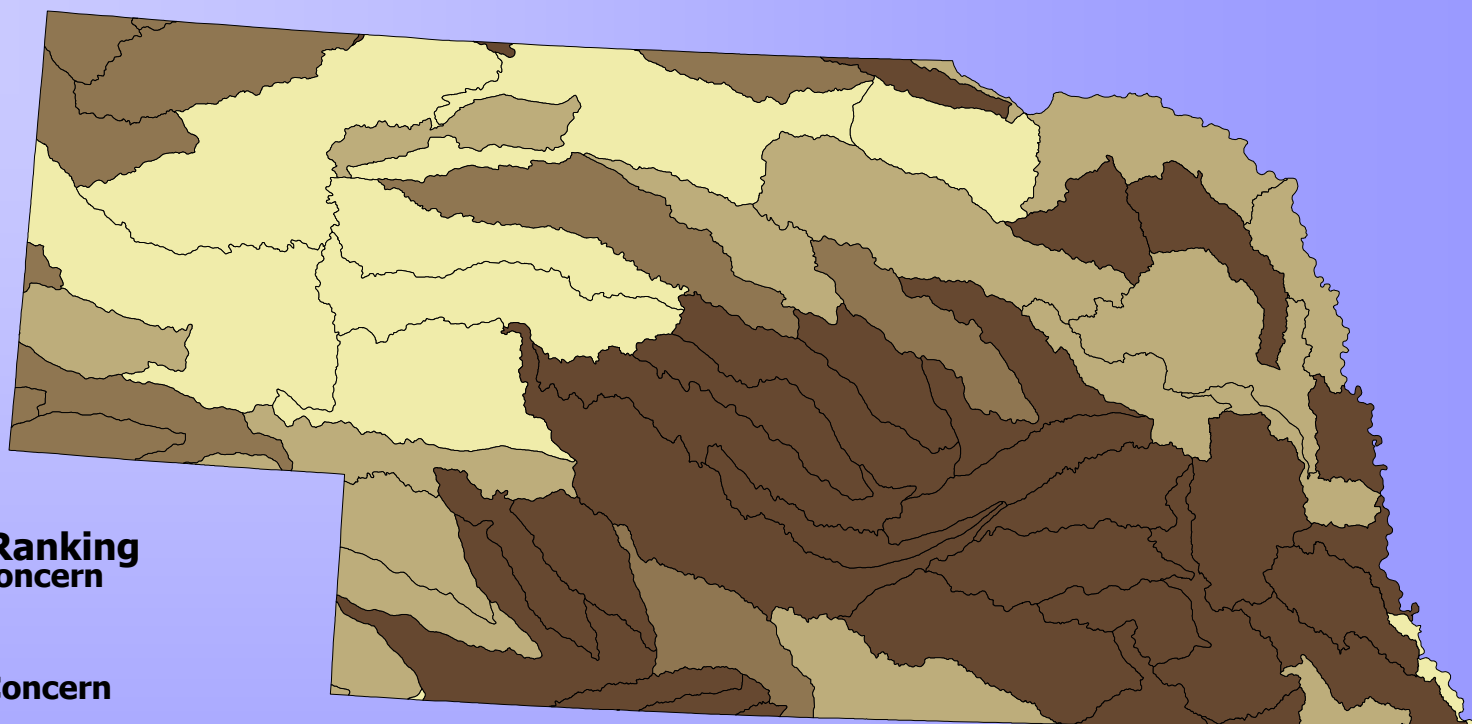
Grazing Lands



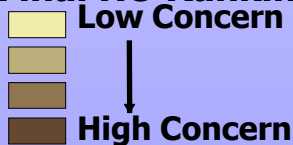
Definition:

Lands with grass, forb and shrub communities managed for forage production but void of cultural management treatments such as fertilization, chemical weed control, reseeding or renovation.

Grazing Lands



Final HU Ranking



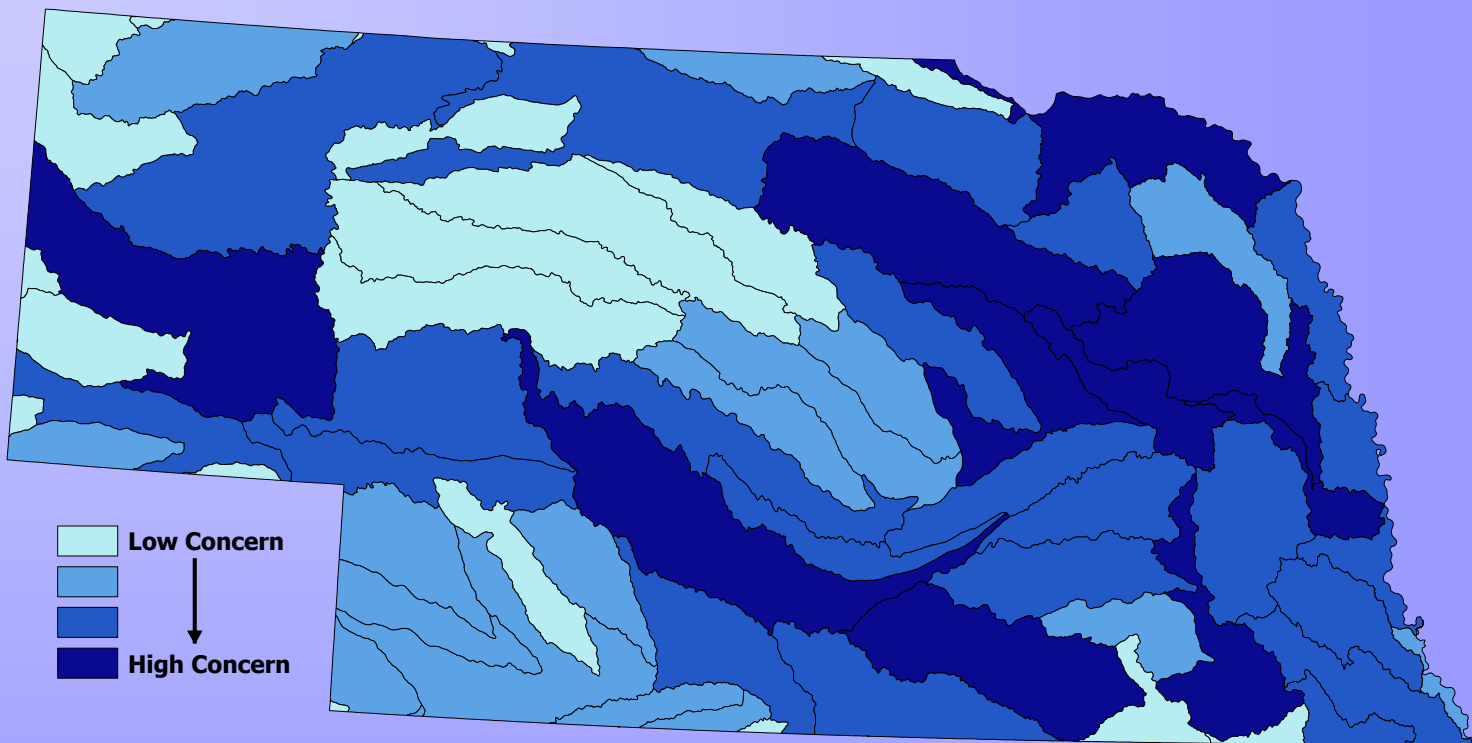
9 base layer components and weights:

- | | | | |
|---|---------------|----------------------------|------------|
| – % Change Rangeland | High Weight | – Range Condition Trend | Low Weight |
| – % Change Grassland | High Weight | – Noxious Weeds | Low Weight |
| – Woody Cover Increases | High Weight | – 5 Year Drought Condition | Low Weight |
| – % Grassland | Medium Weight | – Range Water Erosion | Low Weight |
| – T & E and At Risk Grassland Dependent Species | Medium Weight | | |

Water Quality



Water Quality



Surface Water Quality

- Water Erosion **Medium Weight**
- Water Quality – 303d List **High Weight**
- T & E Species Aquatic Habitat **Low Weight**
- % HU containing Wetlands **Low Weight**

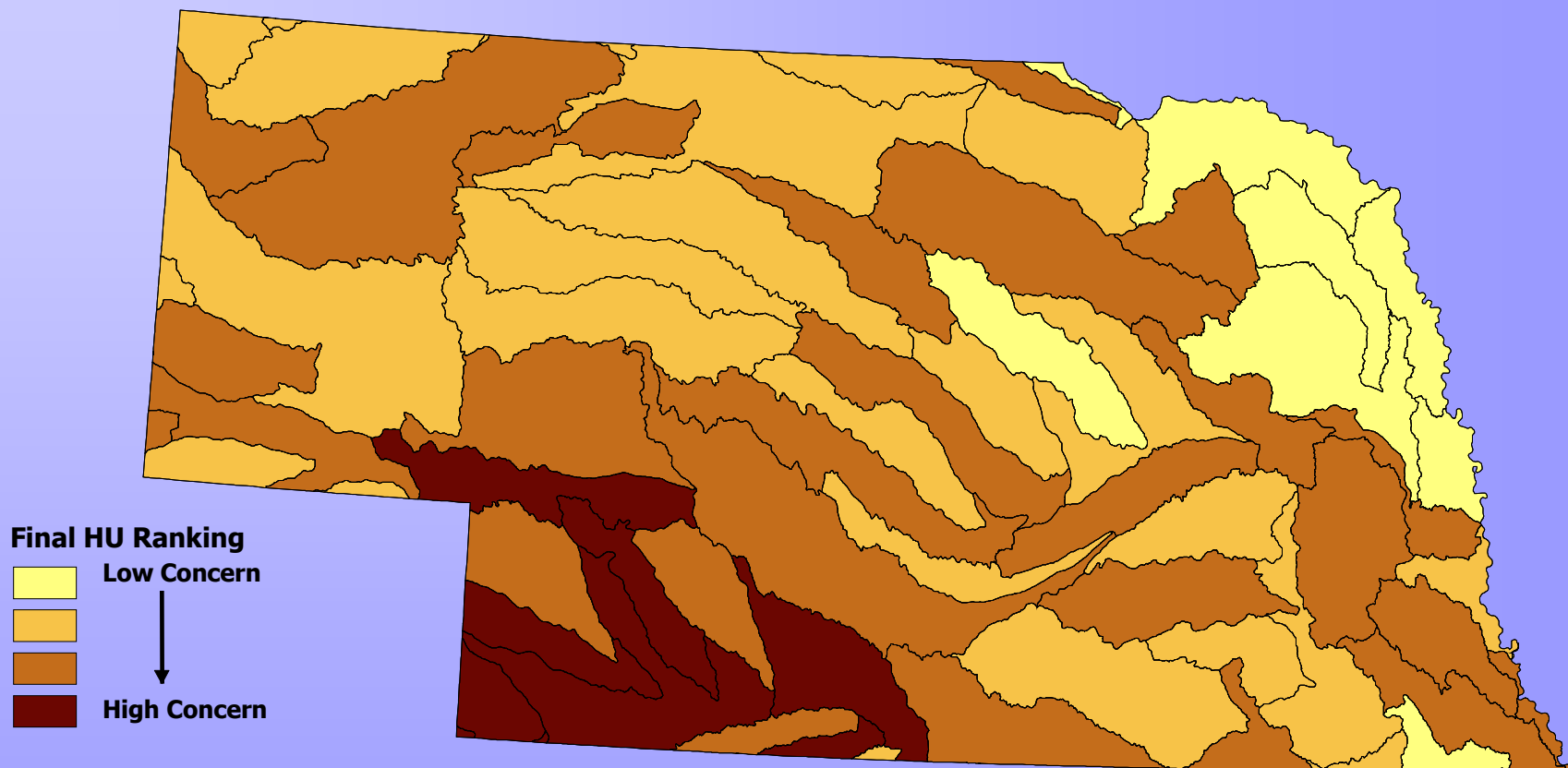
Ground Water Quality

- Nitrate Levels **High Weight**
- Pesticide Levels **High Weight**

Water Quantity

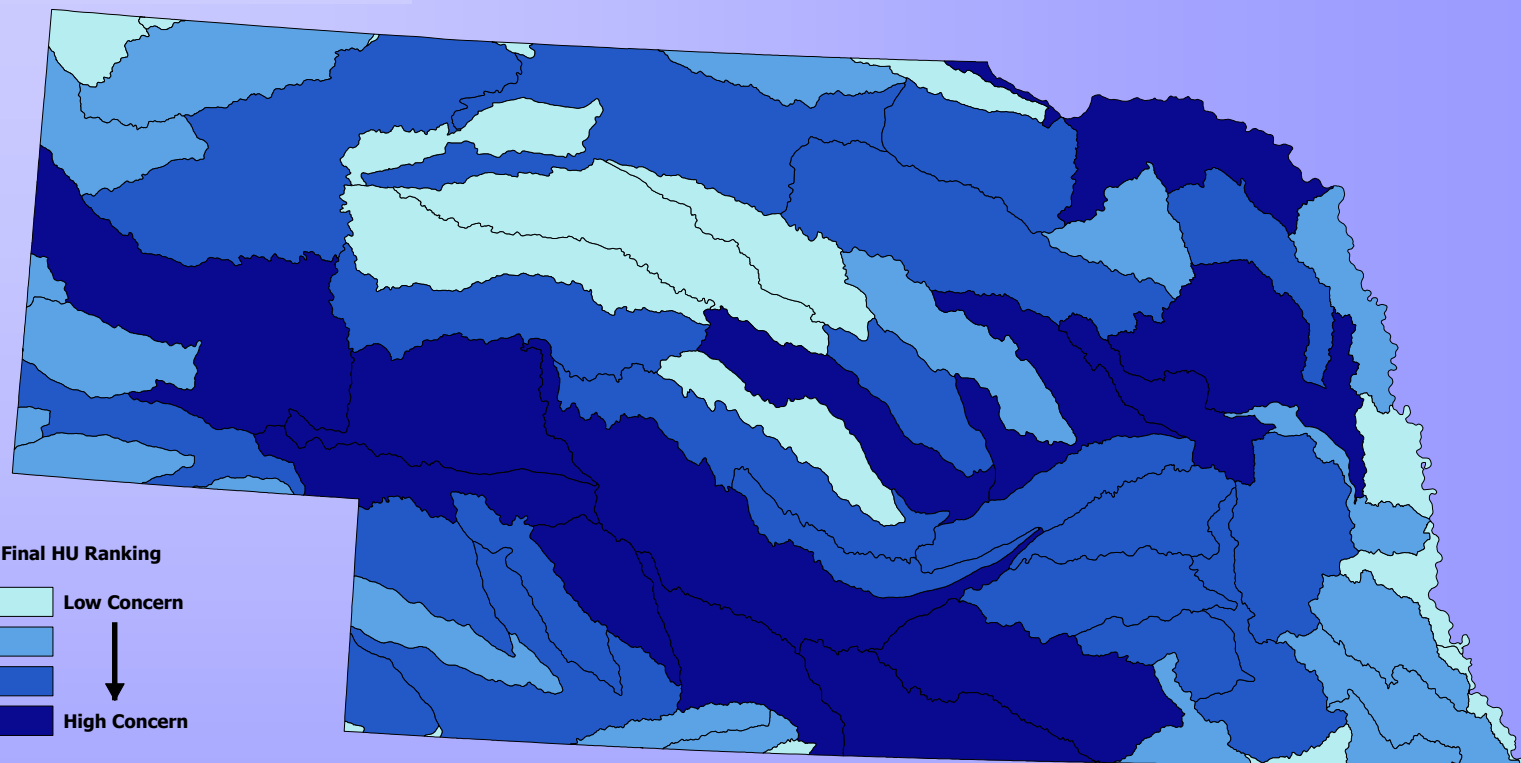


Surface Water Quantity



- 5 base layer components and weights:
 - 5 Year Drought Trend High Weight
 - SW Flows Decline High Weight
 - SW Flows Rise Low Weight
 - SW Consumptive Use Change Medium Weight
 - SW Consumptive Use Very Low Weight

Ground Water Quantity

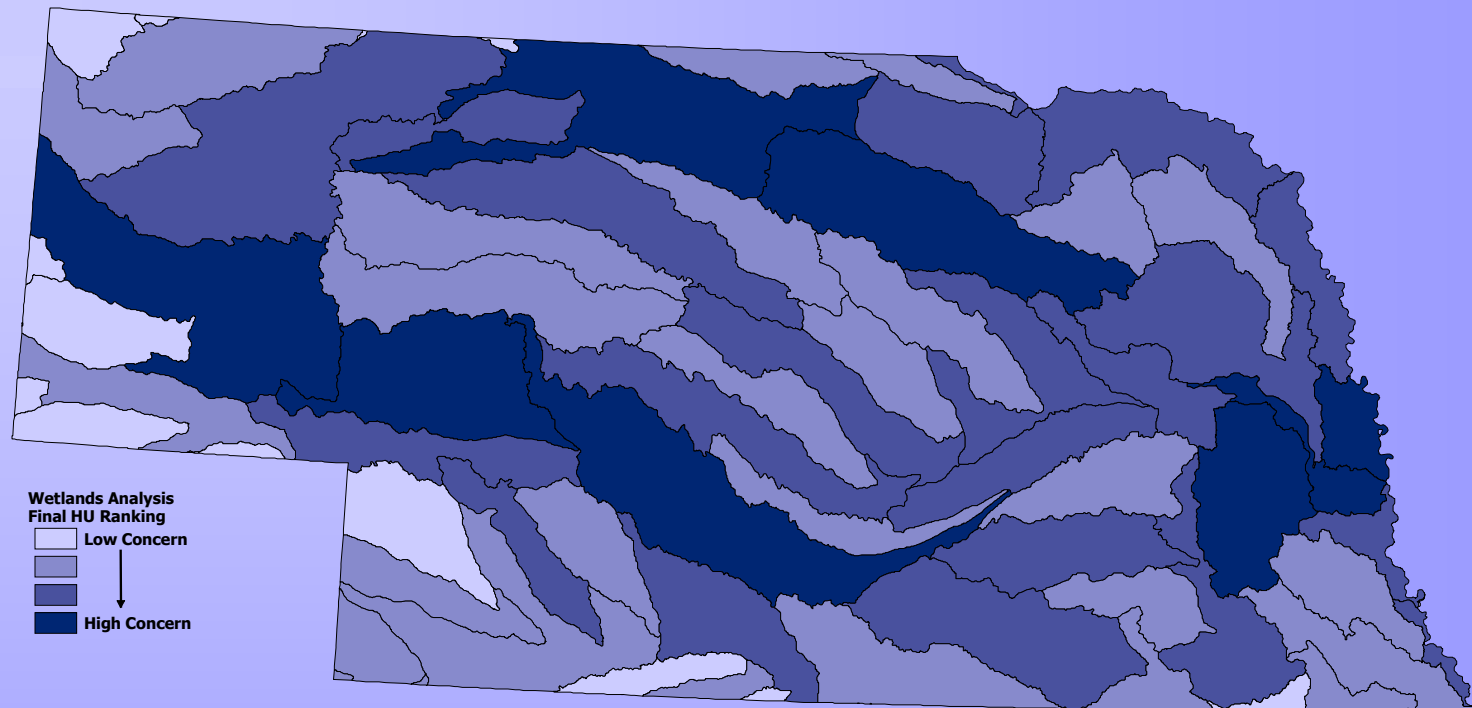


- 7 base layer components and weights:
 - GW Level Decline 1999, 03, 04 High Weight
 - GW Level Decline Predev - 04 High Weight
 - GW Aquifer Thickness High Weight
 - 5 Year Drought Trend Medium Weight
 - GW Consumptive Use Low Weight
 - GW Level Rise Predev - 04 Very Low Weight
 - GW Level Rise Very Low Weight

Wetlands



Wetlands

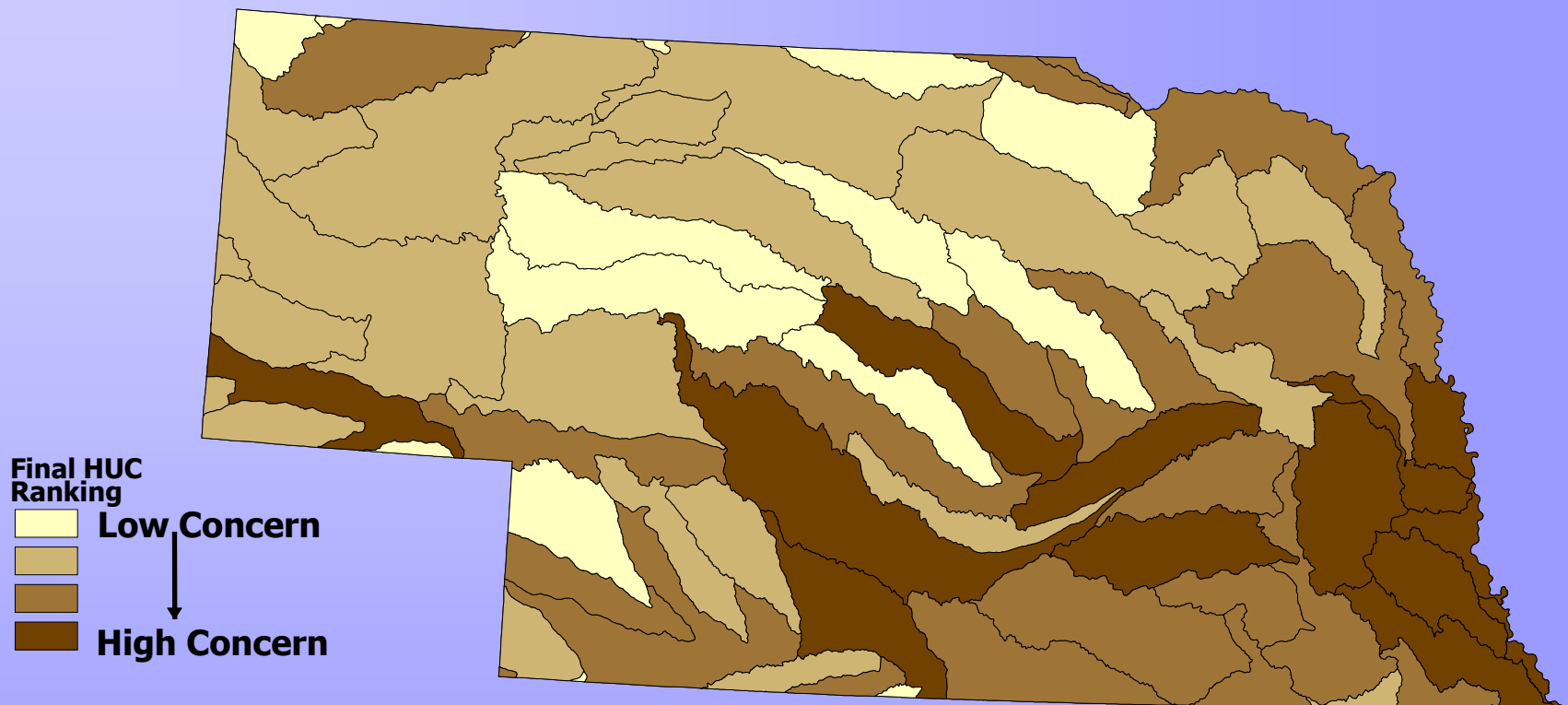


- 8 base layer components and weights:
 - T & E Wetland Species High Weight
 - Surface Water Quality High Weight
 - Wetland (% of HU) Medium Weight
 - Wetland Trend Medium Weight
 - Noxious Weeds (Purple Loosetrife) Medium Weight
 - GW Level Decline Low Weight
 - Surface Water Flow Decline Low Weight
 - Wetland Complexes Low Weight

Wildlife



Wildlife

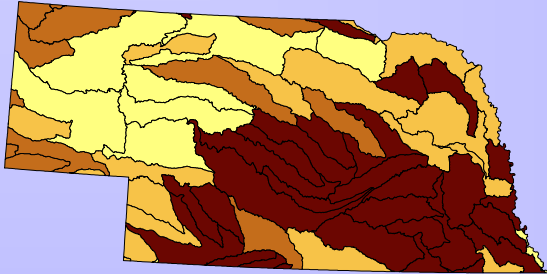


- 9 base layer components and weights:

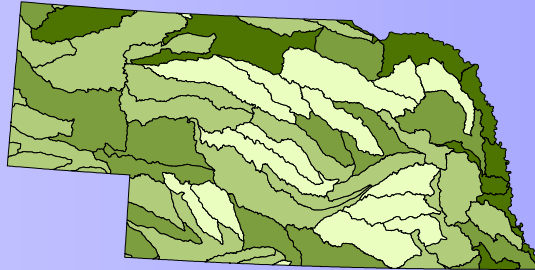
- | | | | |
|-----------------------|---------------|-----------------------|------------|
| – T & E Species | High Weight | Urban/Built-Up Trend | Low Weight |
| – % Change Grassland | High Weight | Surface Water Quality | Low Weight |
| – % HU Cropped Fields | Medium Weight | SW Flow Decline | Low Weight |
| – Wetland Trend | Medium Weight | | |
| – At Risk Species | Medium Weight | | |
| – Forestland Trend | Medium Weight | | |

NERA 2005

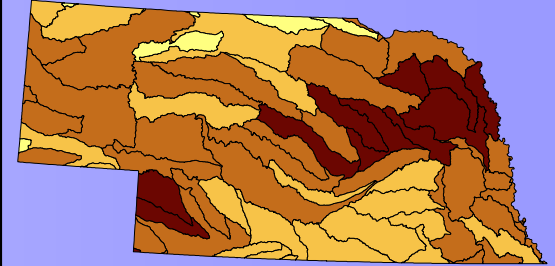
Final Rangeland



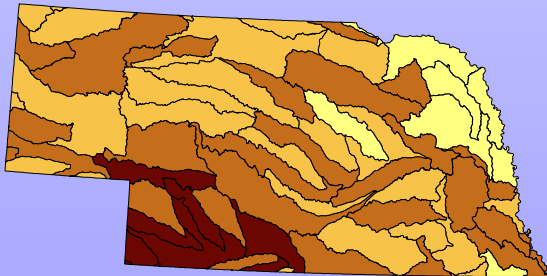
Final Forest



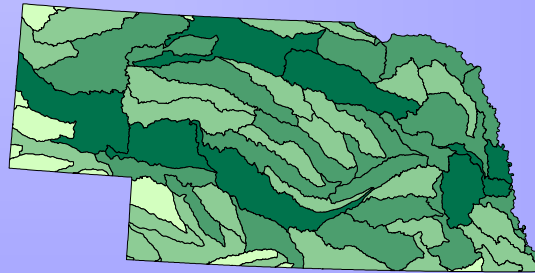
Final Soil Quality



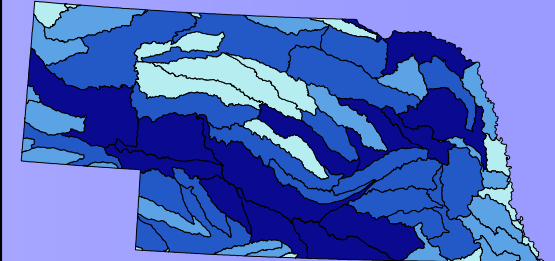
Final Surface Water Quantity



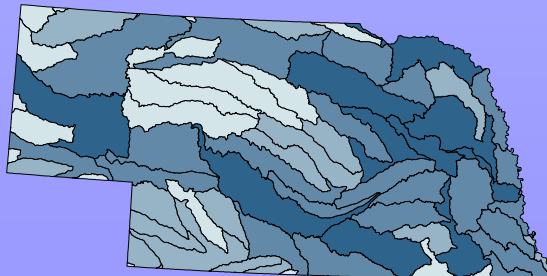
Final Wetlands



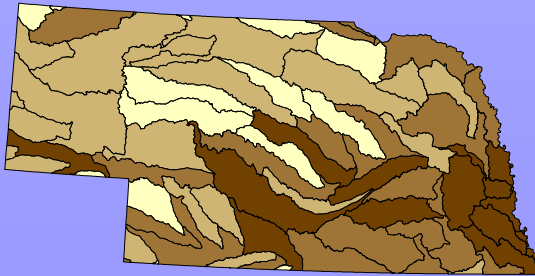
Final Ground Water Quantity



Final Water Quality



Final Wildlife



USDA NRCS
Nebraska State Office

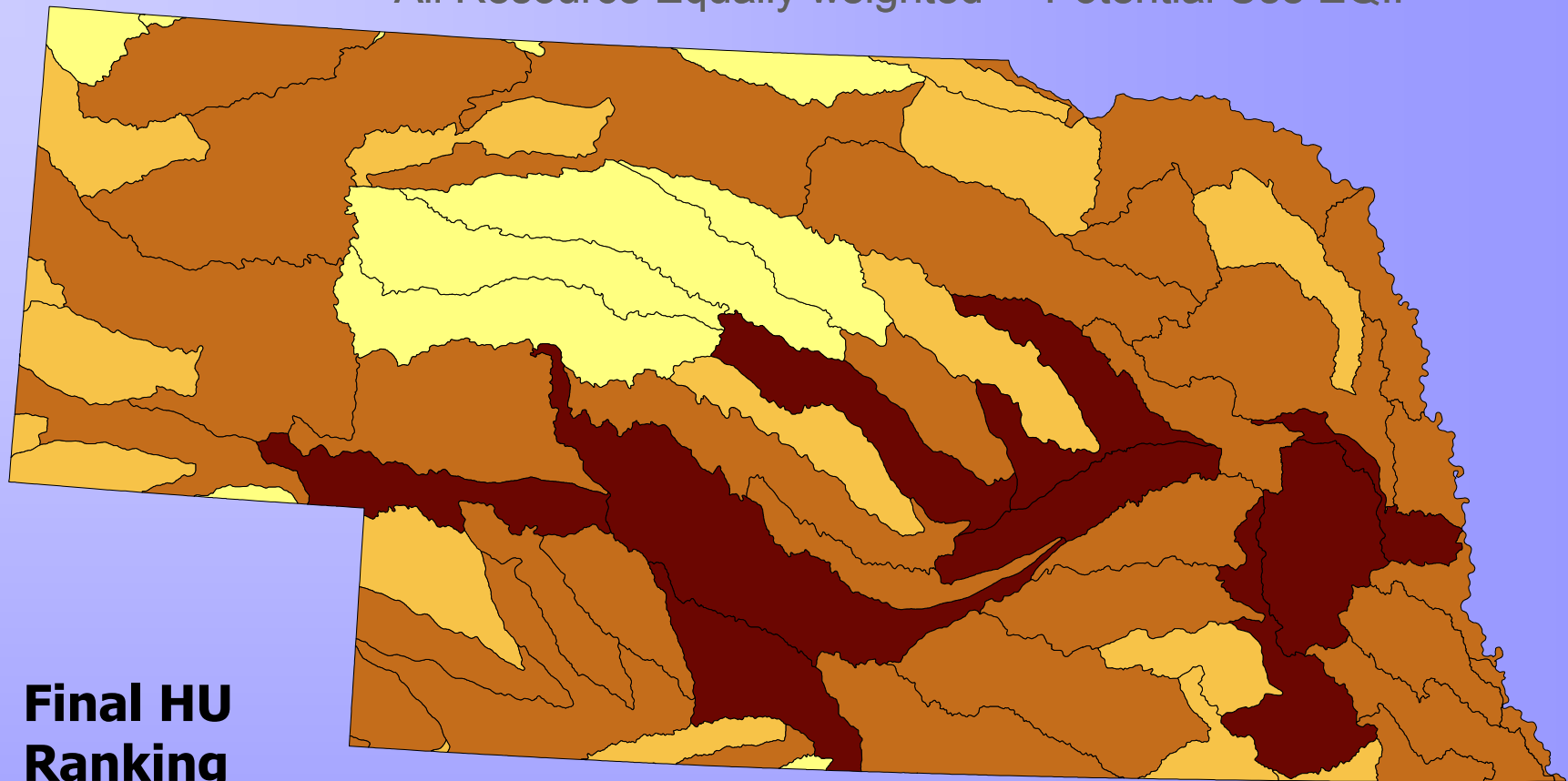
Using The Assessment

- NERA 1 has been utilized significantly within NRCS for planning purposes. NERA 2005 will continue to be used for these purposes as well.
- Will continue to use revised NERA, for planning purposes within NRCS.
- Maps available via Nebraska NRCS Web Site
- Major difference from NERA 1 to NERA 2005 is one overall map will not be created. The Sub Committee decided to have the 8 individual Resource Concern Maps. Maps can be used individually, as a group, or portions of sub data can be used as well.

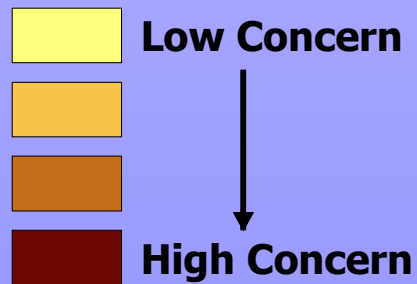
Examples of Possible Uses

- EQIP Analysis – Use all Resources
- WHIP Analysis – Use At Risk Sub Data and T & E Species Combined
- Staffing Plan – Use all or individual
- WRP – Would use Water Quality portion and T & E Species Sub data
- GRP – Grasslands Reserve Program, could use the grazing lands portion of NERA

All Resource Equally weighted – Potential Use EQIP



Final HU Ranking



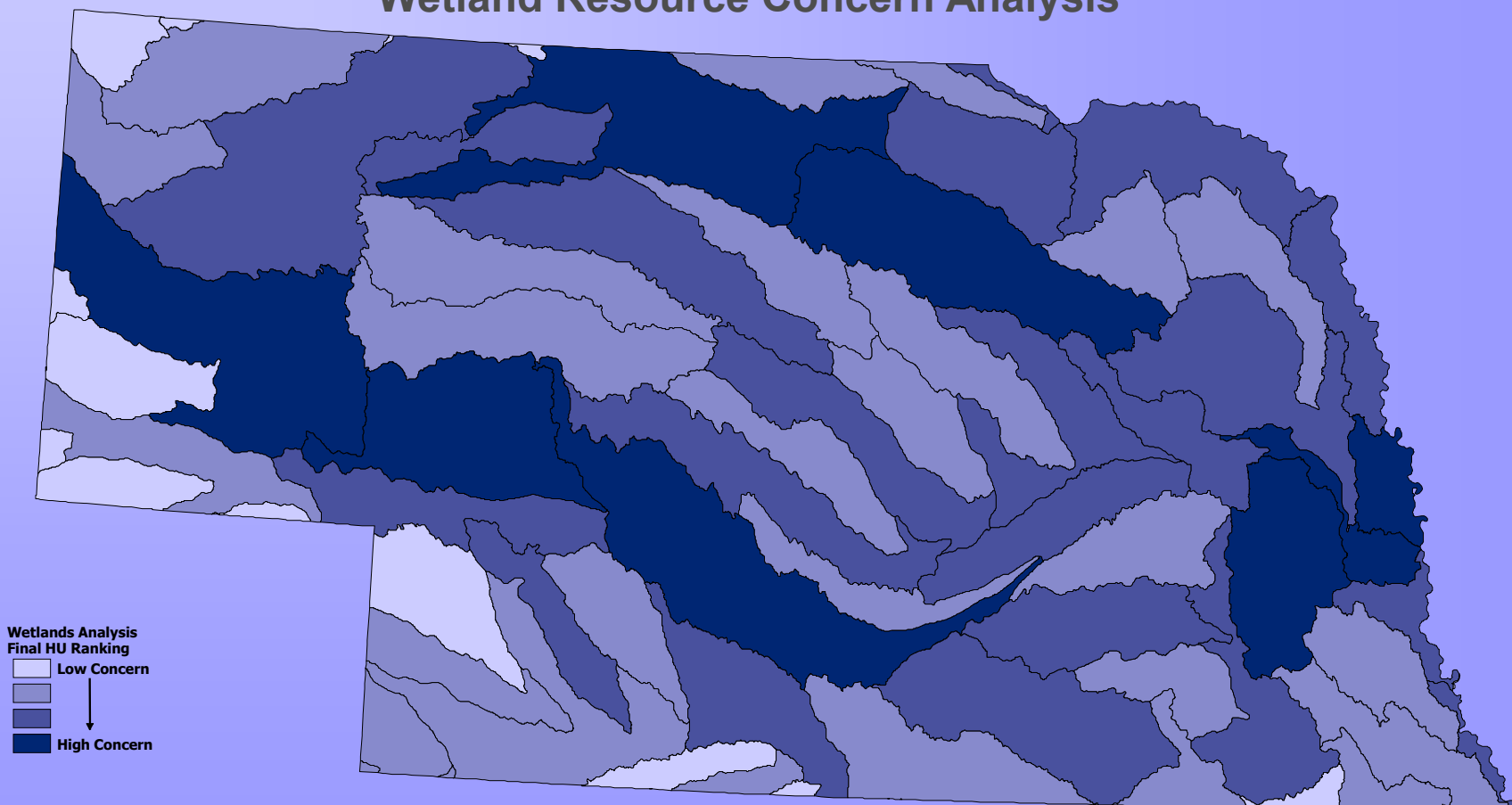
Each Resource Concern ranking are assigned equal weight:

Low Concern	1
Medium Low	2
Medium	3
High	4

All final resources summed and classified into four overall final categories (H, M, ML, L).

• Staffing Plan – Wetland Resources

Wetland Resource Concern Analysis



Updates Planned

- Continuous update process as data becomes available.
- New or updated data can be incorporated into current assessment.

